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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.

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Applicant

Roberts, D. A., et al.

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For

Low VOC Clean Room Cleaning Wipe

Art Unit

1771

Examiner

Boyd, J.A

Docket No.

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REPLY BRIEF UNDER 37 CFR §41.41

This reply brief is in response to the Examiners Answer having a mailing date of August 29, 2005.

Beginning at page 11 of the Examiner's Answer, the Examiner alleges in her arguments in the Answer that Applicants' have failed to rebut the prima facie case of obvious made by the Examiner's combination of Morin, et al, in view of Wilkinson, et al. The Examiner advances two theories supporting her allegation that Applicants' have not met this burden. They are:

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- 1. Once the alcohol of choice has been shown to be suited for use in a cleanroom application, as shown by Wilkinson, et al, it would have been obvious to optimize the amount of the acetylenic alcohol of Wilkinson, et al in the wipe of Morin, et al; and,
- 2. Applicants have not shown criticality of the claimed range and have not rebutted that the invention is mere optimization, nor have they shown that the language "consisting essentially of" excludes the addition of components that do affect the basic and novel characteristics of the invention and specifically how the presence of the levels of alcohols in view of Morin, et al would destroy the basic and novel characteristics of the invention.

Applicants Response

Morin discloses a wipe suited for many applications, e.g., automotive paint rooms, (Example 2) semiconductor, and pharmaceutical cleanrooms (col. 7, lines 17-18) and lists a host of solvents, e.g., isopropanol, that may or have been used for those applications (col. 7, lines 18-26). Wilkinson, et al disclose the use of acetylenic alcohols for solubilizing CO₂ in water for use in super critical CO₂ cleaning of electronic components.

Examiner's Theory #1

First, there is no direction or teaching in Morin, et al, that would direct one to focus on the low VOC (volatile organic compound) and low NVR (non volatile residue) requirements of Applicants' claimed invention as set forth in independent Claims 20 and 23 (also refer to page 3, lines 10-15 and page 6, lines 20-25 of Applicants' Specification) for wipes employed in semiconductor cleanrooms. Applicants have pointed out in several places that the alcohols enumerated in the prior art, as exemplified by Morin, et al, do not meet the low VOC and low NVR requirements (0.001 to 0.5%, see page 4, lines 15-23 of Applicants'

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Specification). In order for these prior art alcohols to be effective, an amount of alcohol outside this range must be used.

Second, there is no direction in the cited prior art how one would approach optimizing the level or the amount of the acetylenic alcohol to meet these requirements. The only range with respect to the level of alcohols, i.e., isopropanol, afforded by Morin, et al, for use in the many applications is from 1 to 99% in water, a range clearly outside the range (0.001 to 0.5%) set forth in Applicants' Claims 20 and 23. Wilkinson, et al, disclose a general range of 0.5 to 10% acetylenic alcohol in CO₂ super critical cleaning operations (page 5, lines 51-52). That range too, except for the 0.5% level, is outside Applicants' claimed range.

Examiner's Theory #2

Applicants have pointed out that criticality of the amount of the acetylenic alcohol, when viewed in the context of cleaning a surface or any other element, is limited at the low end of the amount of such alcohol by whether it is effective as a cleaner and/or solubilizer. As the Applicants point out at page 6, line 7 of the Specification, the minimum level of acetylenic alcohol employed is that which is effective, i.e., that amount necessary to dissolve or solubilize the contaminates found in electronic cleanroom surfaces. The maximum amount allowed in the wipe is that amount which does not exceed the amount of VOC or NVR tolerated in the cleanroom environment.

The Examiner emphasized in the Answer that the burden is on the Applicants to show how the addition of additional components do affect the basic and novel characteristics of the invention. It is apparent from the record, that if one uses a 6% solution of isopropanol in water to achieve an effective wipe (page 4, lines 19-23 of Applicants' Specification), the level of resulting VOC would not meet the maximum levels of VOC permitted by Claims 20 and 23. Thus, Applicants assert that if one were to add components that adversely affect the

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tolerated VOC and NVR levels of Claims 20 and 23, the "consisting essentially of" language would exclude those compounds. Clearly, their presence would cause the wipe to exceed the claimed maximum VOC and NVR levels.

In summary, it is the Applicants' position that the references cited by the Examiner do not establish a *prima facie* case of obviousness and, even if it is assumed that a prima facie case of obviousness has been made, that prima facie case has been rebutted by the Applicants.

Any additional fees or credits are authorized to be charged to Deposit Account No. 01-0493.

Respectfully submitted,

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